

REMARKS

Claims 160-177 and 237-271 are pending. No claims are amended or cancelled herein. Claim 272 is added. Support is found, e.g., at p. 23, lines 21-22.

Rejections under 35 U.S.C. § 102

Claims 160-169, 172-175, 178-248, 251, 253-254, 257, 259-260, 263, 265-266, 269 and 271 are rejected as allegedly anticipated by U.S. Pat. No. 5,822,274, hereinafter “Palsson.” As an initial matter, Applicant notes that claims 178-236 had been previously cancelled. Accordingly, Applicant will address the rejection of claims 160-169, 172-175, 237-248, 251, 253-254, 257, 259-260, 263, 265-266, 269 and 271. Applicants traverse the rejection. It is well settled that to anticipate a claim, the reference must teach every element of the claim. As articulated by the Federal Circuit, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The examiner bears the burden of presenting at least a *prima facie* case of anticipation. *In re King*, 801 F.2d at 1327, 231 USPQ at 138-39; *In re Wilder*, 429 F.2d 447, 450, 166 USPQ 545, 548 (CCPA 1970). Applicant submits that the examiner has failed to meet this burden.

Claim 160 recites in part, “[a]n array comprising a surface suitable for culturing cells, the surface having a plurality of locations, wherein each location comprises (i) eukaryotic cells and (ii) a feature comprising one or more defined nucleic acid molecules in a discrete location, wherein ... the nucleic acid molecules are ... affixed to the surface...” The Examiner has failed to point to any teaching in Palsson of a surface having a plurality of locations, wherein each location comprises eukaryotic cells and a *feature* comprising one or more defined nucleic acid molecules in a *discrete location*. The Examiner points to Palsson’s teaching that, the “cell culture surface includes those dishes, plates, flasks, bottles and hollow-fiber cell culture systems produced by various manufacturers for growing cells including COSTAR, NUNC and FALCON.” Applicant submits that these generalized teachings fail to describe a surface having a plurality of locations, wherein each location comprises eukaryotic cells and a *feature* comprising one or more defined nucleic acid molecules in a *discrete location*, as recited in claim 160. The Examiner does not point to any teaching that Palsson deposited particles so as to result

in features positioned at discrete locations on a surface of a dish, plate, flask, bottle, or hollow-fiber cell culture system. The Examiner states that, “given the broadest reasonable interpretation the cited art clearly anticipates that invention as claimed.” While the Examiner may be permitted to give the cited art the broadest reasonable interpretation, the Examiner is *not* permitted to simply reject Applicant’s claims with such a cursory statement. Applicant reminds the Examiner that the standard for a proper rejection on grounds of anticipation requires that, “[t]he identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). In making a rejection for anticipation it is incumbent upon the Examiner to explain how the cited art allegedly shows Applicant’s invention in as complete detail as contained in the claim. This the Examiner has failed to do. Accordingly, Applicant submits that the Examiner has failed to establish that Palsson anticipates claim 160 or claims dependent on claim 160 and submit that the rejection of claim 160 and claims dependent thereon should be withdrawn.

Applicant further submits that the Examiner has failed to point to any teaching in Palsson of elements recited in a number of the claims that depend on claim 160. By way of example, Applicant will point out a number of these additional deficiencies in the rejection. With respect to claim 165, the Examiner fails to point to any teaching in Palsson of cells disposed on a surface at a density of $0.3 \times 10^5/\text{cm}^2$ to $3.0 \times 10^5/\text{cm}^2$. With respect to claim 175, the Examiner fails to point to any teaching in Palsson of a surface comprising up to 10,000-15,000 features. With respect to claim 237, the Examiner fails to point to any teaching in Palsson of at least 10 different nucleic acid sequences, let alone any teaching of at least 10 different nucleic acids present on a surface at discrete locations, as recited in the claim. With respect to claim 238, the Examiner fails to point to any teaching in Palsson of at least 100 different nucleic acid sequences, let alone any teaching of at least 100 different nucleic acids present on a surface at discrete locations, as recited in the claim. With respect to claim 239, the Examiner fails to point to any teaching in Palsson of at least 1000 different nucleic acid sequences, let alone any teaching of at least 1000 different nucleic acids present on a surface at discrete locations, as recited in the claim. With respect to claim 240, the Examiner fails to point to any teaching in Palsson of two or more *different* defined nucleic acid molecules, let alone an array comprising features comprising two or more different defined nucleic acid molecules.

Claim 253 recites in part, “[a]n array comprising a surface having a plurality of locations, wherein each location comprises (i) eukaryotic cells that are not present in tissue and (ii) a feature comprising one or more defined nucleic acid molecules in a discrete location, wherein ... the nucleic acid molecules are ... affixed to the surface...”. The Examiner has failed to point to any teaching in Palsson of a surface having a plurality of locations, wherein each location comprises eukaryotic cells that are not present in tissue and a *feature* comprising one or more defined nucleic acid molecules in a *discrete location*. Accordingly, Applicant submit that the Examiner has failed to establish that Palsson anticipates claim 253 or claims dependent on claim 253 and submit that the rejection of said claims should be withdrawn.

Claim 259 recites in part, “[a]n array comprising a surface having a plurality of locations, wherein each location comprises (i) eukaryotic cells that were in a dispersed state prior to forming the array and (ii) a feature comprising one or more defined nucleic acid molecules in a discrete location, wherein ... the nucleic acid molecules are ... affixed to the surface...” The Examiner has failed to point to any teaching in Palsson of a surface having a *plurality of locations*, wherein each location comprises eukaryotic cells that were in a dispersed state prior to forming the array and a *feature* comprising one or more defined nucleic acid molecules in a *discrete location*. Accordingly, Applicant submits that the Examiner has failed to establish that Palsson anticipates claim 259 or claims dependent on claim 259 and submit that the rejection of these claims should be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 170-161, 176-177, 249-250, 252, 255-256, 258, 261-262, 264, 267-268, and 270 are rejected as allegedly unpatentable over Palsson in view of Montgomery et al (PNAS 95(26): 15502-7, 1998), hereinafter “Montgomery” and Fire et al. (U.S. Pat. No. 6,506,559), hereinafter “Fire.” Applicant respectfully traverses this rejection.

In order to meet its burden in establishing a rejection under 35 U.S.C. § 103, the Office must first demonstrate that a prior art reference, or references when combined, teach or suggest all claim elements. See, e.g., *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740 (2007); *Pharmastem Therapeutics v. Viacell et al.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007); MPEP § 2143(A)(1). Claims 170-161, 176-177, 249-250, and 252 depend on claim 160. Applicant submits that the Examiner has failed to demonstrate that even the combined teachings of the

cited references teach or suggest “[a]n array comprising a surface having a plurality of locations, wherein each location comprises (i) eukaryotic cells and (ii) a feature comprising one or more defined nucleic acid molecules in a discrete location, wherein ... the nucleic acid molecules are ... affixed to the surface...,” as recited in claim 160.

Claims 255-256 and 258 depend on claim 253. Applicant submits that the Examiner has failed to demonstrate that even the combined teachings of the cited references teach or suggest “[a]n array comprising a surface having a plurality of locations, wherein each location comprises (i) eukaryotic cells that are not present in tissue and (ii) a feature comprising one or more defined nucleic acid molecules in a discrete location, wherein ... the nucleic acid molecules are ... affixed to the surface...,” as recited in claim 253.

Claims 264, 267-268, and 270 depend on claim 259. Applicant submits that the Examiner has failed to demonstrate that even the combined teachings of the cited references teach or suggest “[a]n array comprising a surface having a plurality of locations, wherein each location comprises (i) eukaryotic cells that were in a dispersed state prior to forming the array and (ii) a feature comprising one or more defined nucleic acid molecules in a discrete location, wherein ... the nucleic acid molecules are ... affixed to the surface...,” as recited in claim 259.

Accordingly, for at least these reasons, the Examiner has failed to meet the burden of establishing a *prima facie* case of obviousness with respect to claims 170-161, 176-177, 249-250, 252, 255-256, 268, 261-262, 264, 267-268, and 270.

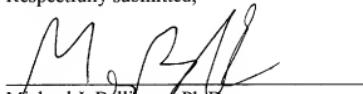
In summary, Applicant submits that the Examiner has failed to establish that the prior art references singly or in combination teach or suggest all the elements of any of claims 170-161, 176-177, 249-250, 252, 255-256, 258, 261-262, 264, 267-268, or 270. Accordingly, Applicant submits that the rejection should be withdrawn.

CONCLUSION

In conclusion, Applicant submits that the claims are in condition for allowance, and such action is respectfully requested. If there are any charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: 10/21/09



Michael J. Belliveau, Ph.D.
Reg. No. 52,608

Clark & Elbing LLP
101 Federal Street
Boston, MA 02110
Telephone: 617-428-0200
Facsimile: 617-428-7045